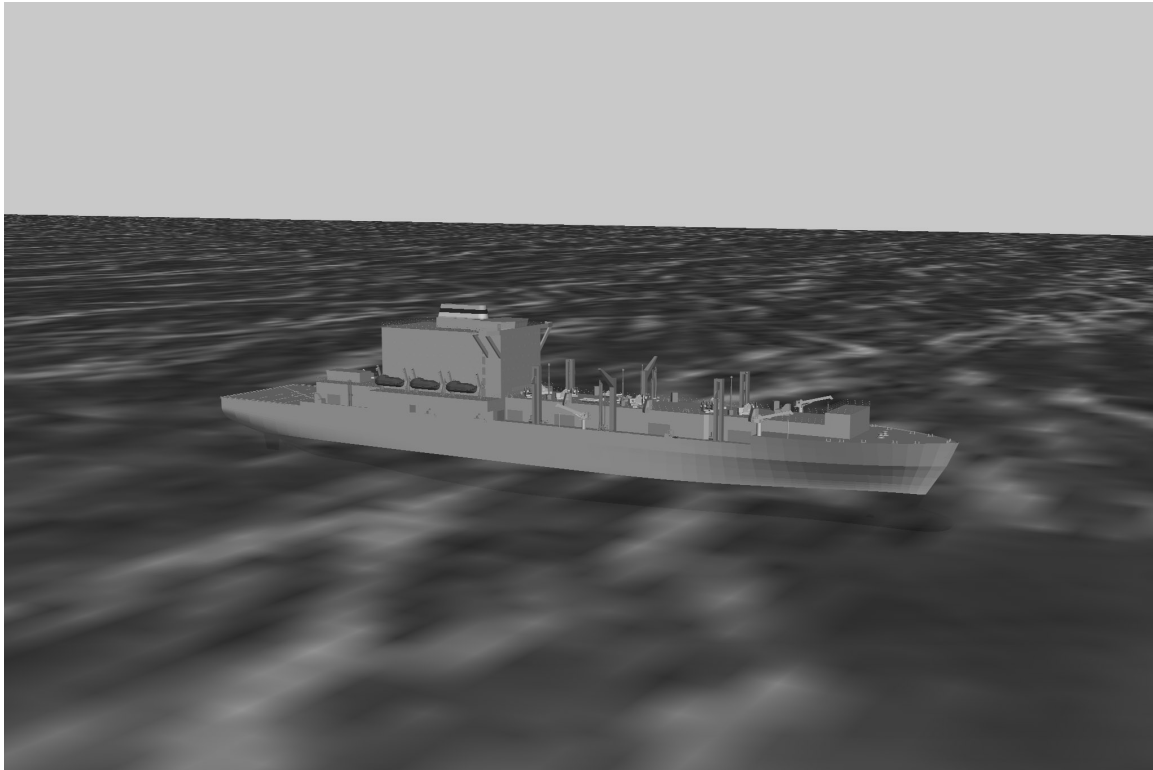


AUXILIARY DRY CARGO SHIP (T-ADC(X))



Navy ACAT ID Program

Total Number of Systems:	12
Total Program Cost (TY\$):	\$4202M
Average Unit Cost (TY\$):	\$ 350.2M
Full-rate production:	N/A

Prime Contractor

TBD

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The Auxiliary Dry Cargo ship program provides a ship to re-supply Navy combat forces at sea. It supports the *Joint Vision 2010* concept of *focused logistics* and enables the battle force missions of *dominant maneuver* and *precision engagement*. The ships will replace the existing AFS- and AE-classes ships and will provide ammunition, spare parts and provisions (dry, refrigerated and frozen). The primary mission of T-ADC(X) is to provide logistics lift from friendly ports or from specially equipped merchant ships to the battlegroup replenishment station ships. The T-ADC(X) will be capable of remaining on station with the battlegroup to fill the station ship role in conjunction with a T-AO-class ship.

BACKGROUND INFORMATION

By 2007, all of the Navy's 8-ship AFS-class and 8-ship AE-class will have reached their 35-year design life. A 12-ship T-ADC(X)-class is intended to replace these ships, as recommended by the study,

which serves as the Analysis of Alternatives for the program. The acquisition strategy, approved in April 1999, includes a single milestone DAB review in late FY00. At that time, the intention is to award a lead ship with priced options for 11 follow-on ships. Four contracts for preliminary studies have been awarded to define innovative concepts for efficiencies in on-board material handling and cargo flow, as well as concepts to reduce life cycle costs through reduction in manning and ship design innovations. Release of a request for proposals (RFP) for detail design and construction phase of the ship is anticipated in early FY00, after the Operational Requirements Document (ORD) and TEMP are approved.

TEST & EVALUATION ACTIVITY

During FY99, DOT&E has continued to actively participate in the program's working integrated product teams. Program immaturity has limited test planning to the identification of probable operational issues and test events and objectives that support an evaluation of T-ADC(X)'s operational effectiveness and suitability. Concurrent approval of the ORD and development of the TEMP are ongoing in support of the RFP release in early FY00.

In FY99, DOT&E reconfirmed the Auxiliary Dry Cargo Ship (T-ADC(X)) Program's designation as an LFT&E oversight program since the ship will be exposed to a hostile combat environment during wartime, provides protection for users, and meets the requisite funding threshold. The Testing Integrated Product Team, along with an LFT&E subgroup, began meeting in February 1999 to develop the LFT&E strategy. The Navy and DOT&E have agreed on the essential features of a LFT&E strategy that will be spelled out in the TEMP. LFT&E resources and surrogate testing issues still need to be resolved. The Navy has started a vulnerability assessment of the government Point Design, and DOT&E participated in the selection of the hit points and threat weapons to be utilized in this assessment. The assessment is scheduled for completion in early FY00.

TEST & EVALUATION ASSESSMENT

The Navy budgeted FY99 funding for preliminary design by industry of T-ADC(X) ship/cargo systems integration, but did not include LFT&E in their plans. The primary goal of the program, as stated in the draft ORD, is to provide effective underway replenishment capacity at the lowest life cycle cost. Since there were no funds budgeted by the Navy for T-ADC(X) live fire test and evaluation, DOT&E does not believe the Navy will be able to conduct adequate T-ADC(X) live fire test and evaluation testing and assessment.

In view of the single milestone decision for this program, DOT&E is working with the Navy to ensure that the TEMP contains adequate linkage between early operational assessments and decisions affecting program execution.

T-ADC(X) is to be built to commercial design standards while having resistance to underwater shock for a very limited number of systems. Recognizing that the issue is not how a system is designed but how it is to be employed, considerable work needs to be completed to characterize the shock resistance of commercial ship design features. Only limited information is available about the ability of a ship built to commercial standards to withstand threat weapons effects. For example, the air blast and underwater shock damage algorithms in the Navy's Ship Vulnerability Model reflect Navy design standards and not commercial design standards. Little surrogate testing has been performed to ascertain the ability of hull structure built to commercial standards to withstand underwater shock and hull

whipping. Similarly, little is known about the ability of modern shipboard equipment built to commercial standards to withstand underwater shock due to a threat weapon attack. A logical starting point for developing an appropriate surrogate test program would be a survey of available data on the response to weapons effects of ships built to commercial practice. DOT&E has articulated the importance of this issue, and the Navy has agreed to begin this work in 1QFY00.

Another concern with the compressed acquisition strategy for T-ADC(X) is that there is no margin in the schedule to perform a vulnerability assessment of the contract design in advance of the Milestone II equivalent decision point, leaving little opportunity for LFT&E to affect the ship design. A vulnerability assessment of the Government's Point Design is currently being performed with the potential to affect the Government's Performance Specification for contract designs. The Navy has agreed to perform a vulnerability assessment of the detail design, the results of which may impact follow ships of the class, but will likely have little effect on the lead ship. The Navy has agreed to make changes as appropriate and cost effective.

